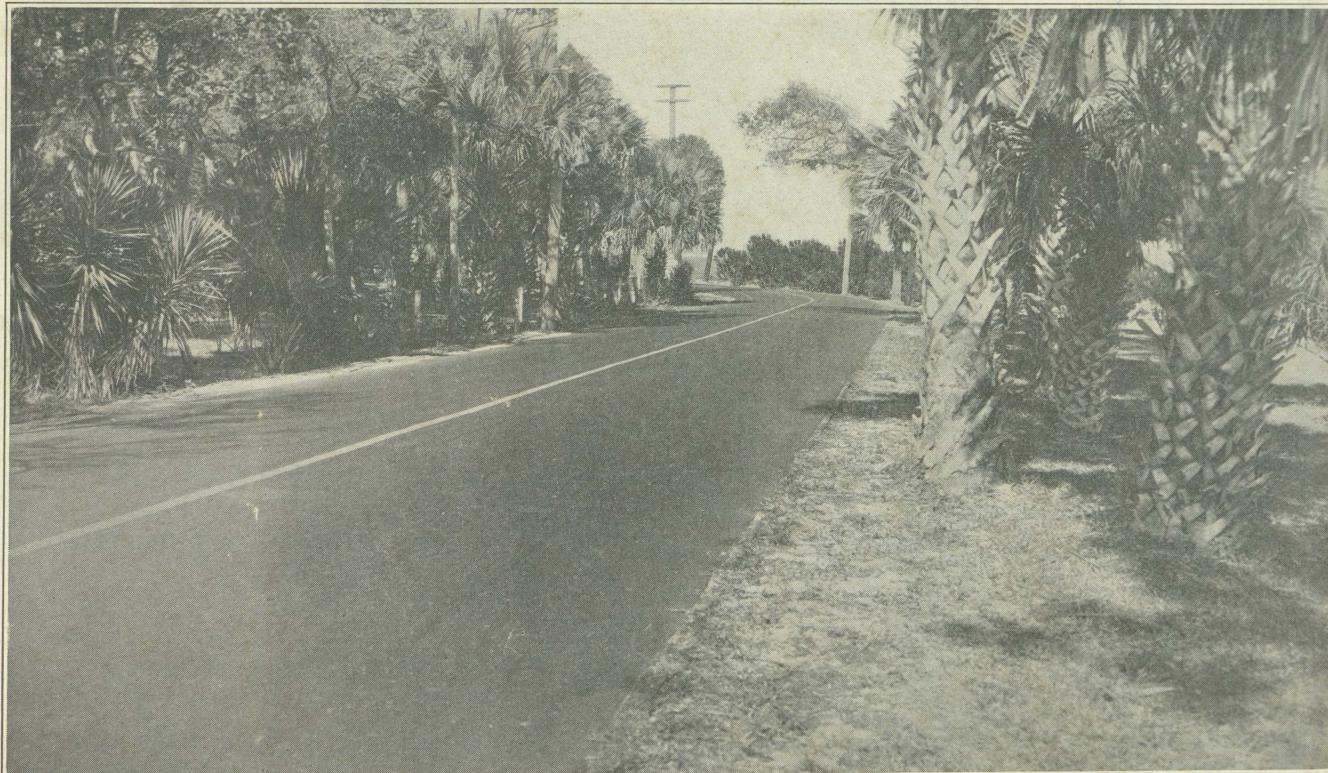


# FLORIDA HIGHWAYS

Official Bulletin of the State Road Department

Vol. VIII

No. 12

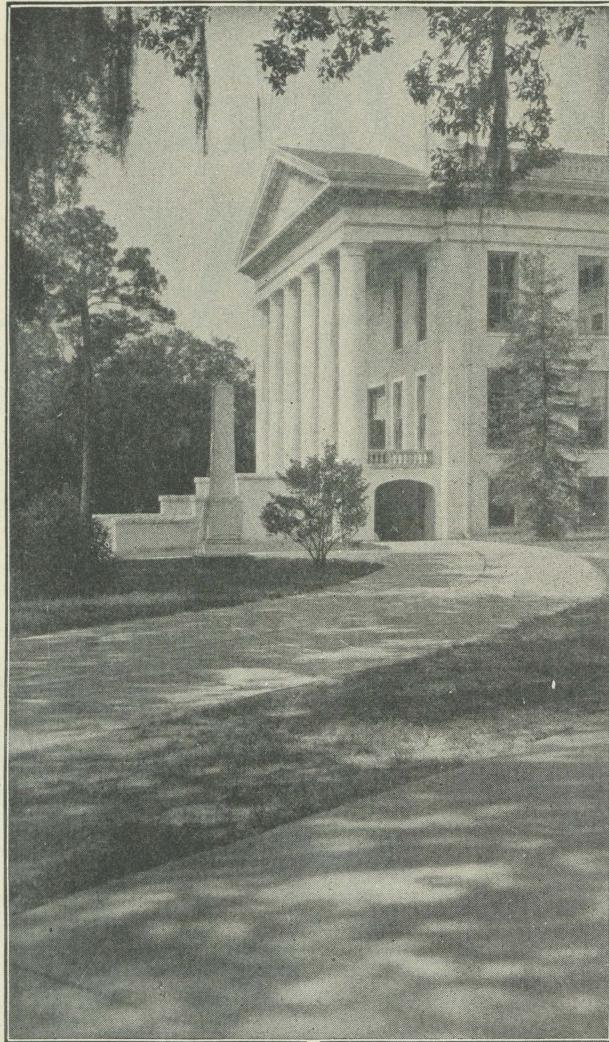


State Road 4, Brevard County.

December, 1931

# FLORIDA

Vol. VIII  
No. 12



# HIGHWAYS

DECEMBER  
1931

## Transactions at Quarterly Meeting of State Road Department Held at Tallahassee, December 9, 1931

THE Fourth Quarterly meeting of the State Road Department was held at Tallahassee, December 9, 1931, with all members present as follows: Robert W. Bentley, Chairman, William A. Shands, Harry H. Wells, Ernest R. Graham and George B. Hills. B. M. Duncan, State Highway Engineer, B. A. Meginniss, Attorney for the Department, and H. J. Morrison, Federal Highway Engineer, were also in attendance.

### Hernando, Pasco and Sumter Counties

Senator S. W. Getzen and Messrs. W. M. Larkin and R. S. Bechtelheimer comprised a delegation from Hernando, Pasco and Sumter counties and presented the following requests to the Department:

(1) That the Department proceed immediately with the paving of that section of State Roads 2 and 23, familiarly known as the "dark stretch," between Bushnell and Dade City.

(2) That Camp 35 be moved from the present location to the grading of that section of Road 2

between Bushnell and the Marion county line when said camp has finished the work on which it is now engaged.

(3) That the Department proceed to grade and construct that section of Road 2 between Webster and Lakeland.

The delegation was informed that if the Engineer finds that the men of Camp 2 will stand idle for any length of time before proceeding with the work now outlined for them, they will be placed upon the clearing of the road from Bushnell north towards the Marion county line.

### Dade City Invitation

Mr. Larkin extended to the members an invitation to hold a meeting at Dade City at the early convenience of the Department.

### Pinellas County

Senator S. D. Harris and Messrs. C. E. Burleson, J. L. Kelly, Karl B. O'Quinn and C. R. Carter presented to the members a request that Road 15 be



# Florida Highways

Published Monthly  
Official Bulletin of the State Road Department

## PERSONNEL OF DEPARTMENT

ROBERT W. BENTLEY (*Bradenton*), *Chairman*  
(*Official Residence, Tallahassee*.)

W. A. SHANDS, *Gainesville*  
H. H. WELLS, *Chipley*  
GEORGE B. HILLS, *Jacksonville*  
ERNEST R. GRAHAM, *Pensuco*  
KARL ROESCH, *Tallahassee*, *Secretary*

} Members

## PERSONNEL OF EMPLOYEES IN GENERAL CHARGE OF THE WORK OF THE DEPARTMENT

### Engineering Division

B. M. Duncan, Tallahassee.....State Highway Engineer  
L. K. Cannon, Tallahassee....Ass't. State Highway Engineer  
W. I. Nolen, Tallahassee.....Bridge Engineer  
H. C. Weathers, Gainesville.....Testing Engineer  
F. W. Berry, Jr., Tallahassee.....Office Engineer  
W. L. Thorpe, Gainesville.....Supt. of Equipment

### Division Engineers

FIRST DIVISION .....R. K. Van Camp, Lakeland  
Counties—Charlotte, Citrus, Collier, DeSoto, Glades, Hardee, Hen-  
dry, Hernando, Highlands, Hillsborough, Lake, Lee, Manatee,  
Pasco, Pinellas, Polk, Sarasota, Sumter.

SECOND DIVISION .....Leon B. Thrasher, Ocala  
Counties—Alachua, Baker, Bradford, Columbia, Dixie, Gilchrist,  
Hamilton, Jefferson, LaFayette, Levy, Madison, Marion, Suwan-  
nee, Taylor, Union.

THIRD DIVISION .....E. K. Fogg, Chipley  
Counties—Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf,  
Holmes, Jackson, Leon, Liberty, Okaloosa, Santa Rosa, Wakulla,  
Walton, Washington.

NORTH FOURTH DIVISION.....M. P. Philips, Jacksonville  
Counties—Clay, Duval, Flagler, Nassau, Putnam, Seminole, St.  
Johns, Volusia.

SOUTH FOURTH DIVISION, R. L. Bow, West Palm Beach  
Counties—Brevard, Broward, Dade, Indian River, Martin, Monroe,  
Okeechobee, Orange, Osceola, Palm Beach, St. Lucie.

### Auditing Division

S. L. Walters, Tallahassee.....Auditor

B. A. Meginniss, Attorney for the Department,  
Editor and Business Manager.

widened immediately to a width of 50 feet between the Seminole Bridge and Largo, a distance of approximately 6500 feet. This delegation reminded the members that this is the road which serves the Veterans' Home which has been located in Pinellas County, and that by reason of said location and of the tremendous expenditures which the Government is about to make the road is at present inadequate to handle the traffic and that an emergency actually exists which must be taken care of by the Department in the interest of safety and convenience.

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that this Department does declare that an emergency exists and that the Engineer be directed to proceed immediately to widen to a width of 50 feet that section of State Road 15 between Seminole Bridge and Largo in Pinellas county, a distance of approximately 6500 feet, using state forces in said work.

## Application for Permit to Operate Overweight Trucks

Senator Pat Whitaker and Mr. Burns presented to the Department on behalf of a cooperative association of citrus growers an application for a permit to operate trucks having a gross load in excess of 16,000 pounds but not in excess of 16,000 pounds per axle, and that the Department do declare that an emergency exists under the provisions of Section 10 of Chapter 15625 (Page 1097, Acts of 1931) authorizing the issuance of such permits for a temporary and/or unusual purpose or emergency. They presented to the members an opinion from the Attorney General which holds that the Department has jurisdiction to determine whether or not under all the facts such an emergency exists, and if they so find, to grant such permit. They further stated that they would submit to the Highway Engineer an exact description of the vehicles which they propose to use, together with the specifications thereof.

On motion of Mr. Wells, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that the matter of application for a permit submitted this day by a cooperative association of citrus growers to operate trucks upon the highways of a gross load of more than 16,000 pounds, be and the same is hereby referred to the Chairman, the Attorney and the State Highway Engineer of this Department, with power to act in the premises.

## Road 19, Madison and Jefferson Counties

Senator S. D. Clarke headed a delegation of citizens from Jefferson county which again presented to the members the matter of the early paving of that section of Road 19 in Madison and Jefferson counties.

On motion of Mr. Shands, seconded by Mr. Wells, the following resolution was adopted:

BE IT RESOLVED that the Chairman be and he is hereby authorized to advertise for bids for the paving of that section of Road 19 in Jefferson and Madison counties, the said bids to be taken at the March, 1932, meeting of this Department.

## Lake County, Road 2, Tavares to Mount Dora

Senator T. G. Futch and Messrs. H. C. Duncan and C. B. Treadway of Lake county again presented to the members a request that asphaltic construction

be used in the paving of that section of State Road 2 between Tavares and Mount Dora.

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that the Attorney for this Department be and he is hereby requested to interpret the provisions of the law governing the expenditures of Lake county funds with a view to determining whether or not the Department is confined to the use of asphaltic cover materials in the paving of State Road 2 between Tavares and Mount Dora, and particularly the provisions of Chapter 10802, Acts of 1925.

### Seminole County, Road 3

Hon. George Whitfield McRory, Representative of Seminole county, urged the Department to commence at the earliest possible moment the construction of State Road 3 between Sanford and Lake Monroe, including the Lake Monroe bridge.

Mr. McRory also discussed with the members the matter of the Department's program with reference to emergency aviation landing fields.

Mr. McRory also reminded the members of the exhibit which the State will have at the International Exposition to be held in Chicago in 1933 and stated that the Florida Commission will want a map from which there can be made a relief map of the state highway system.

### Award of Contracts

On motion of Mr. Hills, seconded by Mr. Shands, the following resolution was adopted:

WHEREAS, this Department, pursuant to due advertisement, received on December 7, 1931, bids for the construction of certain projects and for the furnishing of certain materials, supplies and equipment; and

WHEREAS, the firms and individuals herein-after named were and are hereby declared to be the lowest responsible bidders therefor,

NOW, THEREFORE, BE IT RESOLVED that contracts be and they are hereby awarded for the construction of such projects and for the furnishing of such materials, supplies and equipment, as follows:

### Construction

Project 57, Road 3, Nassau and Duval counties,	
C. G. Kershaw Contracting Company	\$128,305.26
Project 60-A, Road 4, Volusia county (sidewalks) Duval Concrete Company.....	8,594.06
Project 948, Road 22, Orange county, McVay Lindsay & Son .....	112,948.49

### Materials

Project 1035, Road 158, Bay county, liquid asphalt, Mexican Petroleum Corporation .....	\$ 8,760.80
Project 688, Road 10, Bay county, liquid asphalt, Mexican Petroleum Corporation.....	24,108.00

### Equipment

Mud-jack, J. L. Hart Machinery Co., Tampa	\$ 3,152.64
Automobile for State Highway Engineer, Buick sedan, Sun Buick Company, Pensacola	1,740.00

### Project 875-B, Roads 2 and 23, and Project 868, Road 5

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that action on the bids received on December 7, 1931, for the construction of Project

875-B and for supplies for Project 868 be deferred for the present.

### Invitation to Unveiling of Monument to Former Chairman M. M. Smith

The Chairman presented to the members an invitation to attend the unveiling of a monument which has been erected at the Georgia-Florida line in memory of M. M. Smith, former Chairman of this Department, the said unveiling to be held December 20th.

### Crushed Gravel

The State Highway Engineer directed the attention of the members to the difficulty which he has encountered in securing crushed gravel from Roquemore Gravel Company on its contract for delivery of same for work on Roads 20 and 78. After discussing the matter, the following resolution was on motion of Mr. Wells, seconded by Mr. Hills, duly adopted:

WHEREAS, Roquemore Gravel Company has failed to make prompt delivery under the terms of its contract for crushed gravel for use on Road 20; and

WHEREAS, said company has offered to furnish in lieu of such gravel the necessary slag for such surface treatment, at a price of \$2.75 per ton, the said price for crushed gravel in its present contract having been \$2.95,

NOW, THEREFORE, BE IT RESOLVED, that this Department do substitute slag for use in the surfacing of Project 500-C, Road 20, in lieu of crushed gravel, and that Roquemore Gravel Company be permitted to furnish the same under its present contract, at a price, however, not to exceed \$2.75 per ton f. o. b. cars on the job.

### Road 140, Dade County

Mr. Graham presented to the members a request from Dade county that it be permitted to make for the Department the necessary betterment of one mile of Road 140 just north of Miami Beach, at a cost not to exceed \$4,000, and with the understanding that said county will be reimbursed by the Department in the year 1932.

On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that the Chairman be and he is hereby authorized to effect an arrangement with the County of Dade for the immediate betterment of one mile of Road 140 north of Miami Beach at a cost not to exceed \$4,000 and with the understanding that said county will be reimbursed therefor during the year 1932.

### Road 30, Indian River County

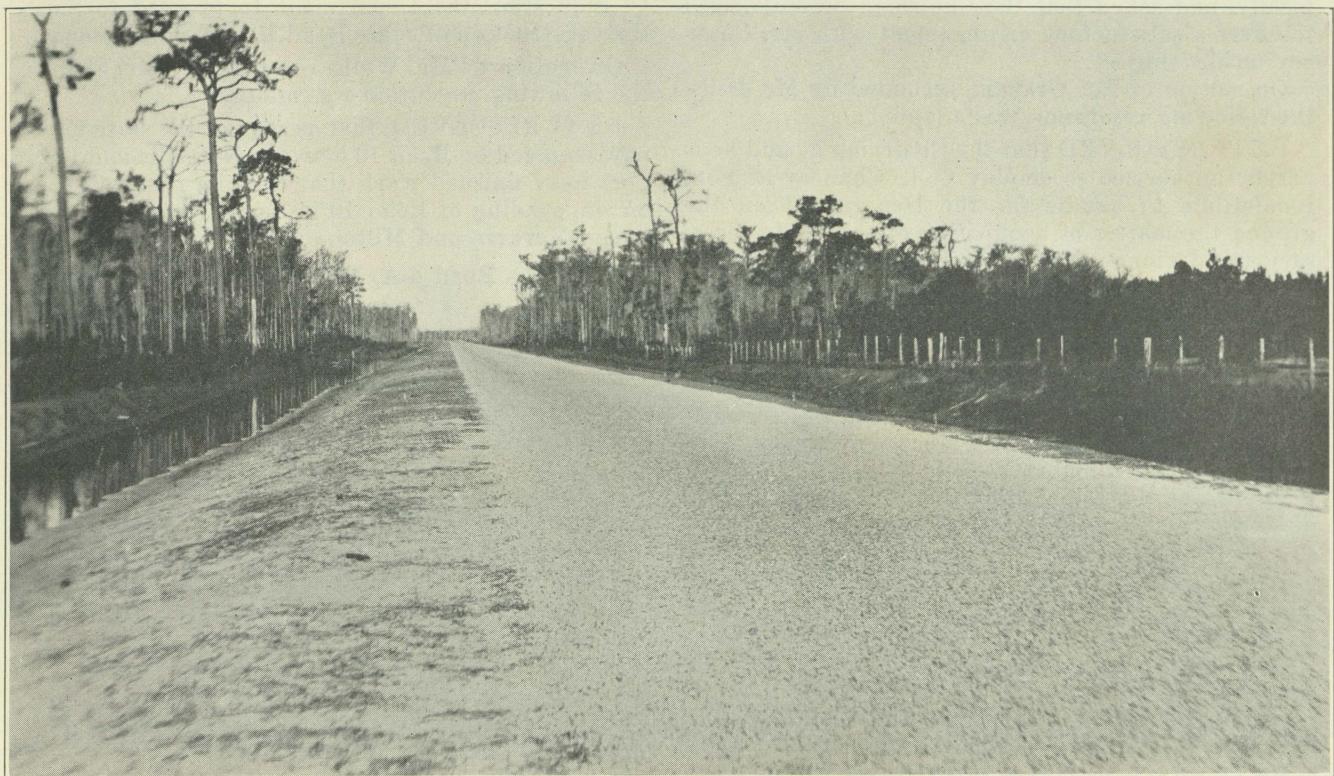
On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that the State Highway Engineer be and he is hereby authorized to arrange with John E. Ballenger Construction Company to apply the oil on that section of State Road 30 from the Florida East Coast Railway to the end of the rock as now laid, at and for a price for such operation as is named in its contract for Project 893.

### Projects 912 and 913, Road 85

On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED that the Chairman be and he is hereby authorized to advertise for bids for the



Federal Aid, Road 24, Rock Base Slag Surface Treated.

furnishing of materials to be used in the construction of Projects 912 and 913, Road 85, Martin and Okeechobee counties, such bids to be received at the March, 1932, letting.

On motion of Mr. Shands, seconded by Mr. Graham, the Department was adjourned until two o'clock P. M.

#### AFTERNOON SESSION—2:00 O'CLOCK

Present as at morning session.

#### Road 4-A—Toll Bridges

The Chairman presented to the members a letter and an estimate which he has received from George J. Rosenthal in connection with his proposal to construct and lease to the State toll bridges on Road 4-A between Key West and the mainland. After discussing the matter fully, the following resolution was on motion of Mr. Shands, seconded by Mr. Wells, duly adopted:

WHEREAS, there has been presented to this Department a proposal to enter into an arrangement looking to the leasing of certain toll bridges to be constructed on Road 4-A; and

WHEREAS, in the judgment of the members of this Department the proposal as framed calls for a greater obligation on the part of the State than it is in a position to undertake,

NOW, THEREFORE, BE IT RESOLVED, that the parties presenting said proposal be advised by the Chairman that it is the judgment of the members of this Department that it has not the power or capacity at this time to enter into such an arrangement as is proposed.

#### Projects 680 and 681—Bay County Bridges

On motion of Mr. Wells, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED that an emergency be and the same is hereby declared with reference to the repair of the piers on the bridges over East and West Bay, Projects 680 and 681, Bay County, and that the Chairman be and he is hereby authorized to procure such materials as may be necessary and to do the necessary work of repairing said piers.

#### Road 14, Lots at Hawthorne

The matter of adjustment with the Seaboard Air Line Railway Company for lots of said railroad at Hawthorne which have been entered upon by the Department was again presented.

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that the Chairman be and he is hereby authorized to advise the officials of the Seaboard Air Line Railway Company that this Department is willing to enter into an arbitration to determine the amount which the Department should pay to the Seaboard Air Line Railway for lots belonging to said Railway Company and occupied by the Department at Hawthorne; the Chairman to appoint one arbitrator on behalf of the Department, the Railway Company to appoint one in behalf of its company and the two so appointed to name a third, which said three shall act as a board of arbitration, both parties to be bound by the findings of a majority of said arbitrators.

#### Project 63-C, Drainage Ditches

The Attorney for the Department reported to the members that he has made a visit to Fort Lauderdale in connection with the acquisition of lands necessary for drainage ditches on Project 63-C and has made a proposal to Mr. C. L. Chancey, Attorney at Fort Lauderdale, to handle the same for the Department

locally, and asked that the Chairman be authorized to effect a satisfactory arrangement with Mr. Chancey on the subject.

On motion of Mr. Graham, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that the Chairman be and he is hereby authorized to employ C. L. Chancey of Fort Lauderdale to handle for the Department on the ground the matter of acquisition of the lands necessary for drainage ditches on Project 63-C, it being contemplated that such arrangement as Mr. Chancey may make shall be submitted to the Chairman and the Attorney for approval before consummation.

#### Columbia County, Road 82

The Chairman submitted to the members certified copy of a resolution from the Board of County Commissioners of Columbia county in which they requested that the Department begin the construction of Road 82, using for such purpose the approximate sum of \$40,000, being the amount of accrued interest on bonds heretofore delivered to the Department by said county, and the sum of \$29,000 which the said Board has arranged and requested the Board of Administration to turn over to the Department for this purpose.

On motion of Mr. Shands, seconded by Mr. Graham, the following resolution was adopted:

BE IT RESOLVED that this Department do agree to the proposal of the Board of County Commissioners of Columbia county, that it commence the construction of State Road 82 using therefor the amount of accrued interest on bonds heretofore delivered by said county to the Department, as well as the sum of \$29,000 to be turned over to the Department by the State Board of Administration at the request of said County Commissioners of Columbia county.

BE IT FURTHER RESOLVED that no work shall be commenced on this project until the Department shall have received the said funds from the State Board of Administration.

#### Columbia County, State Road 82

The Chairman presented to the members a resolution from the Board of County Commissioners of Columbia County requesting approval by this Department of an arrangement which said Board of County Commissioners has effected with Investors Service Association, Incorporated, for the exchange of \$12,000 of Hamilton County 5% Road Bonds, or any portion thereof, now in the hands of this Department and to the credit of State Road 82, for a like amount of Columbia County 5% Road Bonds par for par, with the customary adjustment of accrued interest.

On motion of Mr. Shands, seconded by Mr. Bentley, the following resolution was adopted:

BE IT RESOLVED that this Department does consent to the exchange of Hamilton county bonds now in its hands to the credit of State Road 82, Columbia county, for a like amount of Columbia County 5% Road Bonds, as requested in a resolution adopted by said Board of County Commissioners of Columbia county, on December 1, 1931.

#### Santa Rosa County, Road 10

The Chairman brought to the attention of the members a certified copy of a resolution adopted by the Board of County Commissioners of Santa Rosa coun-

ty requesting the Department to proceed to finish the construction of State Road 10 within said county.

On motion of Mr. Wells, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that as soon as the state forces now engaged on Road 10 between Niceville and Freeport have finished work that they be removed back on the grading of Road 10 in Santa Rosa county between Navarre and Milton.

#### Road 4-A, Monroe County

On motion of Mr. Graham, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED, that the Engineer of this Department be directed to investigate the cost of raising the bridges on State Road 4-A, Monroe county, at Sugar Loaf Key, and that he do report his findings to the next meeting of this Department.

#### Road 10, Bay County

On motion of Mr. Wells, seconded by Mr. Shands, the following resolution was adopted:

BE IT RESOLVED that the Engineer of this Department be and he is hereby directed to investigate the feasibility and cost of widening a span of the bridge on State Road 10, Bay county, over West Bay, and that he do report his findings at the next meeting of this Department.

#### Road 10, Franklin County

Mr. Wells again brought to the attention of the members the matter of routing of State Road 10 at Apalachicola, Franklin county. It was the consensus of opinion of the members that the Department is not in a position to comply with the request of the county in this matter.

#### Clay County, Road 68

On motion of Mr. Hills, seconded by Mr. Shands, the following resolution was adopted:

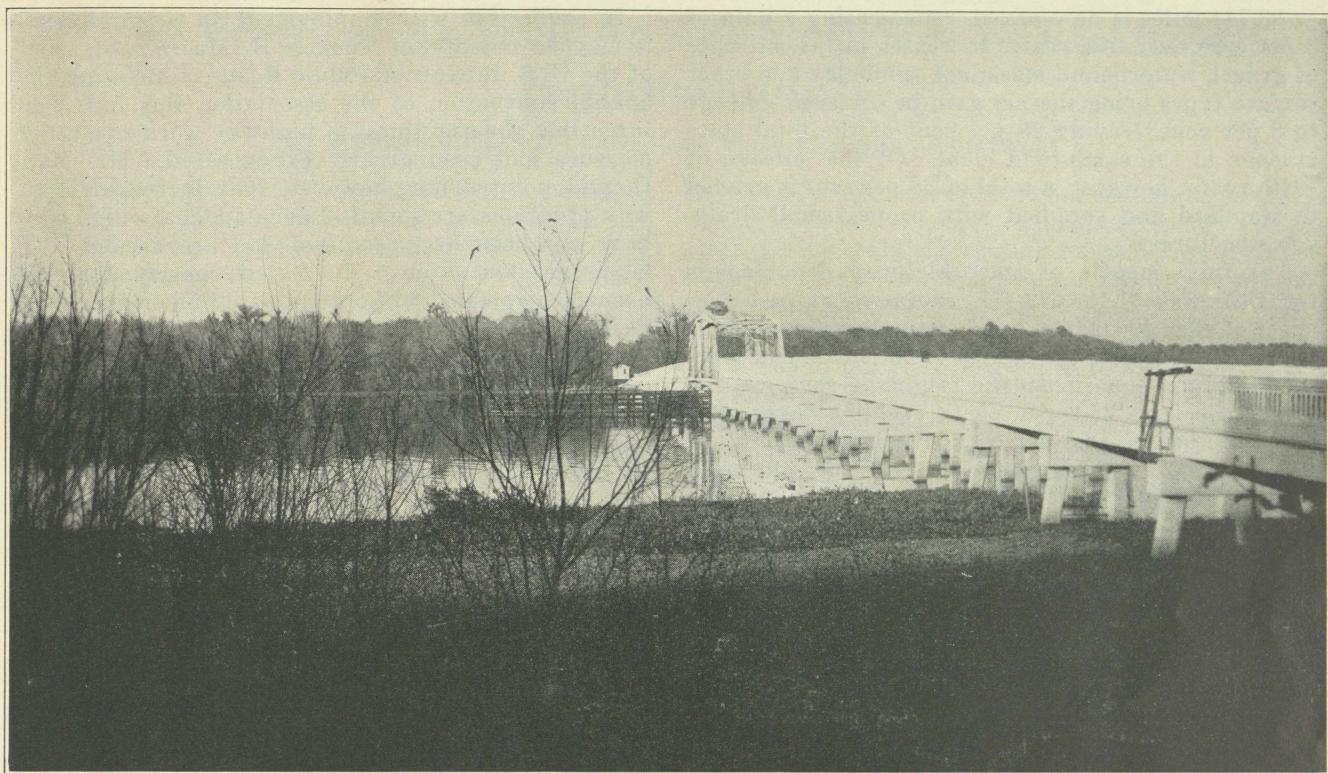
BE IT RESOLVED that the Engineer of this Department be directed to survey and locate State Road 68 from Orange Park in Clay county through Middleburg and to Keystone Heights in the first 60 days of 1932.

#### Project 869, Road 29, Glades County

The Engineer of the Department called the attention of the members to the fact that the contract with Reid W. Bryan & Company on Project 869, Road 29, Glades county, did not contemplate rock excavation, but that the contractor encountered considerable such excavation during the construction, the same being necessary in order to accomplish proper drainage and requiring the use of dynamite and necessitating the purchase of additional equipment designed for rock excavation. He stated that he had discussed the matter with the contractor and had secured a price of 55c to be paid for such rock excavation, which he deemed to be a fair allowance to be made.

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that the Engineer be authorized to make settlement with the contractor, Reid W. Bryan & Company, for rock excavation on Project 869, Road 29, Glades County, on the basis of 55c per cubic yard, to be applied to the approximate quantity of 135,942 cubic yards, less an amount of



State Road 3, Black Creek Bridge.

\$2,988.50 already paid the contractor as extra work and less an amount of \$18,942.84 already paid to the contractor for regular excavation.

BE IT FURTHER RESOLVED, that the amount ascertained shall be paid in two payments, not less than thirty days apart.

#### Seminole County

The Chairman presented to the members an invitation from the Seminole County Chamber of Commerce requesting that a meeting of the Department be held at Sanford at the earliest possible date.

#### Expense Accounts Approved

On motion of Mr. Bentley, seconded by Mr. Shands, the expense accounts of the members were approved.

#### Road 67, Glades County

Mr. Joe Peeples, Representative from Glades county, accompanied by a delegation of citizens from said county, appeared before the Department and presented deeds to the right of way on State Road 67 and asked for the early construction of 10 miles of said road.

#### Hillsborough County

Messrs. W. T. Williams, W. T. Watkins and J. W. Lester, County Commissioners of Hillsborough coun-

ty, and J. T. Lowe, representative, appeared before the Department and stated that they had presented the matters in which they are interested to the Chairman who will give the same consideration.

#### Creation of Division

On motion of Mr. Shands, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that there be and there is hereby created and established the Division of Tests of this Department, and that H. C. Weathers be named and designated as Division Engineer in charge of Tests, with the customary salary of a Division Engineer.

#### Claim of William Denton

Mr. John D. Trammell of Calhoun county presented to the members a claim on behalf of William Denton, who is alleged to have been injured while in the employ of the Department.

On motion of Mr. Wells, seconded by Mr. Hills, the following resolution was adopted:

BE IT RESOLVED that the claim of William Denton be referred to the Chairman and Attorney of this Department for investigation and report at the next meeting.

On motion of Mr. Shands, seconded by Mr. Hills, the Department was adjourned.

## Statistics Show Increased State Highway Construction in 1930

**S**TATISTICS relating to funds expended and miles of road constructed by the highway departments of the several states during 1930 were summarized recently in the annual report of W. C. Markham, executive secretary of the American Association of State Highway Officials.

During the past calendar year the surfaced mileage on state systems was increased by 25,997 miles, but legislative enactments added 6,390 miles to the systems, exclusive of the wholesale annexation of local roads in Pennsylvania and North Carolina. Of the existing state total of 321,723 miles, 29 per cent

or 93,744 miles is now paved, representing a gain of 3 per cent over last year. Increases in the mileages of gravel, waterbound macadam, sand-clay and other surface types bring the net gain in surfaced mileage to 8 per cent, leaving 28 per cent of the total state mileage in the earth-road class. Of the mileage of earth roads, however, a total of 38 per cent is graded to standard and supplied with proper small drainage structures.

The total income of state highway departments for 1930 was \$1,136,673,437, exclusive of cash balances of \$286,490,000 on hand at the beginning of the year. This income, the largest in the history of state roadbuilding, came from the following sources: motor-license fees, 25.9 per cent; gasoline taxes, 36.0 per cent; bonds, 19.5 per cent; local authorities, 5.3 per cent; state tax levies, 0.9 per cent; direct appropriation, 2.8 per cent; federal funds, 8 per cent; miscellaneous, 1.6 per cent. The increased sources of income over 1929 sums by amounts are as follows: motor-license fees, \$11,709,004; gasoline tax, \$123,851,030; bonds, \$61,059,111; federal funds, \$18,890,145. All other sources of income show a decrease. Bond issues were made last year by 18 states, Tennessee leading with \$36,630,772 and Arkansas coming second with \$35,579,816.

#### State Aid to Counties

The position of the association with regard to state aid to counties is that there comes a time in road improvements when a state should be obligated to assist the counties in maintaining a definite county system of highways, definitely coordinated with each other and with the state system. "The percentages of improvement of the state system," the secretary's report states, "doubtless should be the basis of such procedure. What that percentage should be is a matter for local decision. However, the impatience to get a larger system of improved highways seems to have overcome the local political powers, and in some instances the state authorities have been loaded up with road mileages without a full knowledge of the finances needed or the condition of the state system."

Of 28 states claiming that over 70 per cent of the state system is surfaced, 23 now give state aid to counties. There are 14 states whose state systems are less than 70 per cent surfaced in which state funds are divided with the counties. The smallest percentage of surfacing on a state system is 26 per cent. The degree to which states assist county and township roadbuilding is shown by the following figures: number of states controlling in whole or in part the county road systems, 7; states which aid the counties with or without supervision of expenditures, 36; states which aid the townships with or without supervision of expenditures, 14; states in which the counties may or do control road work in townships or towns, 7; states in which the county is the smallest unit for road responsibility, 26.

#### State-Highway Employment

The secretary's report also presents information on the number of persons employed in state highway work. A report from 46 of the 48 states gives the number of people employed directly by the state highway departments on July 1, 1931, as 130,429 and those employed by contractors as 188,507, making a grand total of 318,936. This reduces, for the states reporting, to one person employed for every 369 persons of the population.

In connection with employment on the highways, it may be noted that Thomas H. MacDonald, chief of the U. S. Bureau of Public Roads, addressing the annual convention of the association this fall, ventured that the usefulness of highway work as a relief measure had been greatly exaggerated. Mr. MacDonald pointed out, however, that increased highway programs are sound, "since adequate highways have not been over-produced and are needed to a much greater extent. Increased construction has been accomplished without increased but rather with decreased unit-prices. These lower unit-prices, however, have not been at the expense of unskilled labor, generally speaking."

In addition, Mr. MacDonald stated that "there is a very general agreement among highway executives that upwards of 85 per cent of the road dollar goes eventually for labor and personnel employment."

#### Contracts in 1931

A record was also compiled by Mr. Markham of the road and bridge contracts let by the states during the first six months of 1931, as compared with the contracts let during the first six months of 1930, and this information is given in the accompanying tabulation. There were 31 states which increased their program of contracts for this period over that for the corresponding period in 1930.—Better Roads.

Road and Bridge Contracts Let First Six Months, 1930 and 1931		
State	1931	1930
Alabama	\$ 3,174,022	\$ 283,141
Arizona	4,189,843	1,828,266
Arkansas	7,914,551	7,649,043
California	12,252,797	9,163,199
Colorado	4,700,000	2,780,000
Connecticut	3,366,479	4,460,000
Delaware	1,513,553	1,294,286
Florida	3,072,182	2,220,093
Georgia	8,345,000	5,200,000
Idaho	2,329,018	2,411,969
Illinois	16,242,512	15,020,610
Indiana	7,390,679	3,480,060
Iowa	15,150,405	19,968,945
Kansas	6,184,840	3,478,435
Kentucky	4,962,396	6,156,373
Louisiana	43,386,305	7,801,483
Maine	3,473,715	2,227,341
Maryland	3,685,274	6,112,369
Massachusetts	7,772,873	5,180,987
Michigan	6,174,397	4,078,780
Minnesota	16,731,311	11,685,737
Mississippi	2,812,000	327,000
Missouri	14,219,813	18,918,545
Montana	6,670,862	1,226,485
Nebraska	7,100,000	3,500,000
Nevada	2,180,912	893,507
New Hampshire	1,145,281	1,929,946
New Jersey	14,903,104	11,590,684
New Mexico	3,767,678	1,709,360
New York	33,189,208	24,891,669
N. Carolina	5,450,225	3,279,385
N. Dakota	2,775,028	1,500,000
Ohio	12,718,305	25,584,715
Oklahoma	6,477,356	7,164,468
Oregon	3,500,000	4,500,000
Pennsylvania	10,777,822	31,905,746
Rhode Island	1,014,128	1,072,292
S. Carolina	3,462,286	10,182,179
South Dakota	3,458,000	1,811,000
Tennessee	3,131,897	11,031,124
Texas	21,335,950	14,254,454
Utah	2,044,782	1,393,970
Vermont	1,104,023	1,816,154
Virginia	3,288,272	4,101,702
Washington	5,248,000	3,741,160
W. Virginia	6,275,669	8,020,598
Wisconsin	14,509,000	12,377,714
Wyoming	3,874,940	1,105,379
Total	\$377,946,693	\$331,810,353

## The Practical As Well As Aesthetic Side of Roadside Beautification

By Luther M. Keith, Connecticut State Highway Department

ANY discussion of the subject given me would, of course, have to consider the aesthetic, and in fact, the name of roadside beautification would especially imply that this infant highway activity was concerned only with the things beautiful. This, however, is not the case. States that have carried on a roadside program have proven, beyond the question of a doubt, that there is a practical side.

Let us, for a moment, visualize the history of State Highways. With the advent of the first automobile, came the demand for hard surface roads. Previous to that time, the building of roads had been the function of towns, townships and counties, but as as it was soon realized that the use of automobiles could not be confined to communities, it seemed that the building of paved roads must be an obligation of the several States and the Federal Government; thus the growth of the automobiles and miles of paved highways went hand in hand.

The manufacturers of cars were most interested, in those early days, in producing a car that would run and give some measure of service. The States were trying, at the same time, to keep up to the demand for improved roads and build as many miles each year as money provided would pave.

The vast expansion in highway construction followed closely to that of the automotive industry and the use of the automobiles increased rapidly not only for commercial but for pleasure purposes also, and there came a radical change in the lives of the people in this country. Under older methods of transportation people did not go far from home except on business trips. Under the new conditions they use our highways in increasing numbers and prolong their trips. In fact, today the highways of this country are the avenues over which the people take their rest, recreation, and pleasure in motor cars.

The result of these changes was inevitable. The love of nature and outdoors that had been more or less dormant was at last awakened. They began to see and compare the natural beauty of one section of the State with another and then one section of the country with another. They demanded and received parks and outdoor recreational places. More and more the scenic resources of this great country, the ever changing panorama of mountains and valleys, rivers and lakes, as seen from motor cars was appreciated.

Then there came into the minds of the people a question: why highways built through lovely scenic country, should be left a ribbon of concrete with the scars of construction for a border. Thus public sentiment was awakened for improved roadsides.

Each one of us is particularly interested in, and proud of our own State and we began to realize that the first impression visitors received was a lasting one. As we observed, we decided that the unsightly view along our most traveled roads could be improved; that roadsides entirely barren or containing tangled growth of dead trees, brush and weeds, raw

slopes and embankments showing erosion after every storm, countless numbers of signs of gaudy colors, glaring billboards obstructing natural scenic views, were not the scenic wonders we cared to have advertise our State.

During the past 10 years but mostly within the last 5 years, many movements have been started for the improvements of roadside conditions. Some of these have been under State supervision, others of a local nature, but in all cases cooperative.

As the result of a questionnaire sent out last spring to all State Highway Departments, it was found that twenty (20) States were carrying on partial or complete roadside programs. Thirteen States have organized units in their highway departments to carry on this work.

Conditions vary in the different States, consequently each State has its own problem to solve. Some of the controlling factors are:

Topography, width of right of way, soil and climate.

Nature of land abutting highways.

Public utility lines, and

Whether the road be winding or straight, rural or urban.

In formulating plans for roadside improvements in addition to the above factors, one must consider the type of road, whether it is a rural and scenic route passing through sections of country that are not, owing to the topography or for other reasons, being developed or built up, or whether it is a heavy commercial route where the truck and bus traffic predominates. Usually the latter passes through sections where the adjacent property is, from time to time, being developed and opportunities for permanent plantings are lessened.

Some of the activities that many of the States are carrying on through their landscape or forestry units in their highway departments are:

Conservation and restoration of trees, shrubs, ferns and wild flowers.

Planting of trees, shrubs and grass.

Seeding, turfing or planting of slopes and embankments.

Construction and maintenance of highway gardens or parks, parking areas and picnic grounds.

Pruning and planting to open and improve landscape and water vistas.

Maintaining and, in some cases, landscaping around historical monuments and other landmarks.

Eliminating, or at least controlling, advertising signs of all kinds.

Supervising the location and appearance of public utility poles within highway rights of way.

Building of comfort stations.

Improving and maintaining roadside springs and other water supplies.

As time goes on and the public sentiment demands a broader program we should consider our highways in three classes:

1. Those that are strictly commercial.
2. Those that are both pleasure and commercial.
3. Those that are parkways intended for pleasure cars only.

In planning for the roadside development of the last two, we should begin at the time the roads are laid out if possible, and then prepare the location in relation to topography and highway alignment, endeavoring to preserve, as far as possible, natural beauty and scenic views.

There is another problem which will perhaps have to be solved at least in connection with pleasure highways, and that is, restricting the use of adjacent property by zoning, scenic easement or purchase.

For over four years Connecticut has had a well defined policy of roadside development. Public acts approved by the General Assembly in 1925-1927 authorized this work and a division was formed in the highway department in July, 1927, to plan and supervise a roadside development program. The cooperation that we received from individuals and organizations has, with the appropriations made by the State, given very substantial results.

We believe that anything that is done to improve the appearance of our roadsides and waste areas or anything that gives the public a better use of them, may come within the scope of our activities. All of this work has an aesthetic valuation and most of it a utilitarian as well.

In discussing some of the activities now being carried on by various States you must remember that

the writer of this paper is more familiar with conditions in the eastern part of the United States; therefore some of the statements made may not apply equally to all sections of the country. In some places, nature has provided trees and shrubs along the roadside and abutting land. Some of our highways are bordered by stately trees planted years ago by people of vision; such trees are a joy to the present generation and should be a reminder of our obligation for the future.

It would seem that from an economical standpoint as well as aesthetic, we should consider the conservation and maintenance of trees and shrubs along our roadsides as of first importance, in fact I think we should go further and endeavor to protect trees adjacent to our rights of way, particularly through woodland areas so that as timber is cut there will be a strip of trees left to protect and beautify our highway. In recommending this conservation policy and the keeping of our roadsides natural, I do not want you to get the impression that I am overlooking the safety of our highways. Plantings should not be allowed to obstruct sight lines at intersections, curves, railroad crossings or other hazardous places; neither should they interfere with drainage.

The seeding or planting of roadsides is an important feature of our work. The treatment of culvert entrances, slopes and embankments so as to stop erosion and the constant reoccurring expense of repairs is one that should be considered entirely from the practical standpoint of dollars and cents.

## CONTRACTS AWARDED BY STATE ROAD DEPARTMENT

January 1st, 1931, to December 26, 1931.

### FEDERAL PROJECTS

Proj.	Road	County	Contractor	Length Feet	Length Miles	Contract + 10%	Type
73-C	17	Polk	John J. Quinn, Inc.		5.22	\$ 165,480.74	Concrete
67	50	Suwannee-Hamilton	Austin Bros. Bridge Co.	461.5	.....	51,993.04	Concrete
60-B	4	Flagler-Volusia	Fred D. Beasley, Inc.	570	.....	107,566.27	Concrete
72-A	28	Putnam-Flagler	Murphy Const. Co.		11.16	92,685.56	Grade
72-C	28	Flagler	Murphy Const. Co.		11.79	121,426.15	Grade
76-A	5	Hillsborough	Johnson, Drake & Piper		10.31	374,163.81	Concrete
78-A	4	Broward	Morgan-Hill Paving Co.		6.28	287,639.15	Concrete
60-C	4	Volusia	Rutherford Const. Co.		8.70	345,848.01	Concrete
78-B	4	Broward	Dudley-Murphy Const. Co.	102	.....	26,515.99	Concrete
77	1	Jackson-Washington	Van Gordon Const. Co.		9.66	240,915.52	Concrete
80	17	Hillsborough	John J. Quinn, Inc.		2.67	105,658.75	Concrete
81	14	Alachua	L. M. Gray		3.30	108,976.94	R.B.S.T.
83	5	Sarasota	E. F. Powers Const. Co.		9.20	262,421.37	R.B.S.T.
3-A	218	Okaloosa	McVay Lindsay & Son		9.17	12,867.55	Sand Clay
57	3	Nassau-Duval	C. G. Kershaw Contracting Co.	1,067	.....	141,135.79	Concrete
Sub Total				2,200.5	78.76	\$ 2,465,294.64	

### STATE PROJECTS

Proj.	Road	County	Contractor	Length Feet	Length Miles	Contract + 10%	Type
879-B	1	Escambia	Soule Contracting Co.	64	.....	\$ 9,895.62	Concrete
892	30	Indian River	Fred D. Beasley, Inc.		13.0	161,914.84	Rock Base
706-B	28	Putnam	T. B. Gillespie, Inc.		14.91	178,153.44	Rock Base
623	35	Madison	Manly Const. Co.		12.13	134,921.07	Rock Base
727	47	St. Johns	F. K. Webb & Associates		4.59	59,974.84	Rock Base
918	0	Gadsden	John E. Ballenger Const. Co.		1.49	31,474.31	R.B.S.T.
806-D	25	Hendry	Thomas Const. Co.	150	.....	10,486.54	Timber
909-C	4-A	Dade	A. B. Curry Const. Co.		4.38	126,529.55	Concrete
952	3	Putnam	John E. Ballenger Const. Co.		.37	14,550.95	R.B.S.T.
710-D	17	Hillsborough	John J. Quinn Co., Inc.		.92	40,989.65	Concrete
893	30	Osceola	Faulk & Coleman		10.50	45,760.00	Sand Asph.
868-A	5	Levy	Duval Engr. & Contr. Co. and L. B.		7.33	63,608.44	R.B.S.T.
868-C	5	Levy	McLeod Const. Co.		12.76	133,784.97	R.B.S.T.
779-B	19	Leon-Liberty	R. J. Arrington & Son	731	.....	38,848.95	Timber & Concrete
60-C	4	Volusia	Duval Concrete Co.		.....	9,453.47	Sidewalks
875-B	2	Sumter	C. T. Felix	700	.....	26,926.90	Conc. Timber
948	22	Orange	McVay-Lindsay & Sons		11.90	124,243.33	R.B.S.T.
Sub Total				1,645.0	94.28	\$ 1,211,152.87	
Grand Total				3,845.50	173.04	\$ 3,676,447.51	

Construction of small parks, picnic grounds and parking areas are a part of a well planned program. Waste areas can be changed to beauty spots that are not only pleasing to the eye but useful to the public as well. At large and irregular intersections, small parks may be built that will act as rotarys for slowing up traffic. Parking areas and picnic grounds made at appropriate locations give the motoring public places to stop and enjoy scenic views as well as to rest and have picnic lunches.

Many of our most beautiful views of the mountains, lakes and rivers as seen from our highways were obstructed by a dense growth of trees and shrubs. Proper pruning has opened these for the enjoyment of the public and has been appropriately called "Painting a Picture With An Axe and Saw." We have found in Connecticut that it was possible to arrange our plantings in some places to frame these pictures. It is also possible to arrange plantings that will obscure unsightly views.

Historical monuments and other landmarks within our rights of way teach us lessons of the past and furnish incentives for the future. The care of these should be our obligation and that obligation should be a labor of love.

Time will not permit the discussion of all the various activities that may be a part of a roadside development program. At the present time the measure of a State is the condition of its highways and the neatness of its roadsides as observed by the several million motor tourists who annually roll over these highways.

In comparing the practical as well as the aesthetic side of this work it would seem that we should consider from the practical standpoint:

1. The increasing opportunity provided for the health and recreation of our people.
2. The benefit that the trees and shrubs planted and other improvements made will be to future generations.
3. The increase in valuation of abutting property caused by roadside improvements.
4. The decrease of cost in maintenance of our highways by intelligent plantings to act as snow breaks.
5. The elimination of erosion by planting and seeding of slopes and embankments.
6. The reducing of the number of accidents by the removal of hazards; the care exercised in locating public utility poles and other structures with regard to safety.
7. The proper control of sight lines at dangerous intersections and blind curves.
8. The creating, awakening, and fostering of civic pride not only within State rights of way but on adjacent property and in villages and boroughs.

Just as improved roads have attracted visitors to a State so does the improvement of these roadsides. The public enjoys much more driving over a perfect pavement bordered by trees, shrubs and grasses than they do riding over the same pavement with ugly roadsides.

In a great many sections of our country today, the entertainment of tourists is a real industry and the millions that they are expending is a revenue very much appreciated. As the public travels over highways built for modern traffic and with roadsides landscaped, they not only enjoy the highway system of that State and the scenery which they view, but they are also impressed with the commercial and in-

dustrial progress of that State. It would seem, therefore, that we are advertising the resources, scenery and industries of a State in an entirely practical way.

In closing this paper, I admit, as I did in the beginning, that roadside beautification has an aesthetic valuation. I have tried to bring to your attention, portions of the work which I believe are perhaps more practical than aesthetic. I hope that I have been able to convince you, if you needed convincing, that there is a practical as well as an aesthetic side of roadside beautification.

I am strongly of the opinion that any roadside beautification and development program should combine the maximum of utility with the maximum of beauty.—American Highways.



“THE traffic problem is the greatest problem that any police department in any city has to face today. Some cities have a big criminal docket, yet no matter where you go you will find that deaths by automobiles are more numerous than those by guns or other criminal means.”

This statement, made at the recent Annual Safety Congress in Chicago by Traffic Inspector Charles Greenwood of Toronto, bears weight. Toronto's traffic safety record far outshines that of any city of its size in the United States, yet even there auticides have a big lead over homicides as a cause of death.

The ratio in the United States is about three to one—roughly 11,000 homicides to 33,000 motor vehicle deaths. The following figures for a recent year show the comparison for several large states.

	Homicides	Autocides
California .....	335	2,271
Illinois .....	674	1,968
Indiana .....	224	1,094
Michigan .....	392	1,527
New York .....	660	3,192
Ohio .....	543	2,320
Pennsylvania .....	500	2,331
Wisconsin .....	66	715

It would seem obvious from these figures that police departments should spend at least as much effort apprehending traffic law violators as they spend on other forms of crime. But the problem is yet so new that traffic accident prevention is of secondary consideration in nearly every city.

## Status of Road Construction

Through November 30th, 1931

Proj. No.	Contractor	Road No.	County	Total Length Miles	Clearing Miles	Grading Miles	Base Miles	Surface Miles	Type	Per Cent Complete
57	R. C. Huffman Const. Co.	3	Nassau-Duval	3.40	3.40	3.23	.....	.....	Grading	98.00
60-A	Convicts	4	Flagler-Volusia	11.76	8.14	5.98	.....	.....	Grading	58.00
77	Van Gordon Const. Co.	1	Wash'ton-Jackson	9.66	.....	.....	.....	9.66	Concrete	100.00
79-A	Convicts	4	Duval	13.31	3.06	3.06	.....	.....	Grading	18.00
83	E. F. Powers Const. Co.	5	Sarasota	9.20	.....	.....	9.00	0.00	R.B.S.T.	83.00
500-C	State Forces	20	Bay	12.18	.....	.....	12.18	8.09	R.B.S.T.	97.00
515	State Forces	20	Jackson	4.59	.....	.....	4.59	2.25	R.B.S.T.	90.00
623	State Forces	35	Madison	12.13	.....	.....	12.13	4.00	R.B.S.T.	90.00
677-B	State Forces	13	Levy	12.58	.....	.....	12.58	12.58	R.B.S.T.	100.00
706-B	State Forces	28	Putnam	14.91	.....	.....	14.91	6.00	R.B.S.T.	92.00
779	Convicts	19	Liberty	8.00	8.00	7.25	.....	.....	Grading	88.00
793	Convicts	15	Citrus	6.45	4.50	1.00	.....	.....	Grading	20.00
793-D	Convicts	15	Citrus	7.99	7.00	4.32	.....	.....	Grading	45.00
797	Convicts	13	Nassau	9.60	8.83	6.34	.....	.....	Grading	78.00
805	Convicts	25	Hendry	9.51	9.51	6.05	.....	.....	Grading	60.00
806-C	State Forces	25	Hendry	11.00	.....	.....	11.00	6.50	R.B.S.T.	95.00
806-D	State Forces	25	Hendry	12.69	.....	.....	12.69	7.00	R.B.S.T.	95.00
826	Convicts	88	Holmes	10.00	1.50	.50	.....	.....	Grading	5.00
832	State Forces	10	Santa Rosa	16.01	.....	.....	.....	4.39	Sand Asp.	27.00
834	Convicts	52	Jackson	16.04	2.00	1.00	.....	.....	Grading	8.00
857	State Forces	53	Santa Rosa	19.30	.....	.....	.....	19.54	Sand Asp.	100.00
868-A	McLeod Co. & Duval Engr. Co.	5	Levy	7.34	.....	.....	7.34	0.00	R.B.S.T.	80.00
868-C	McLeod Co. & Duval Engr. Co.	5	Levy	12.71	.....	.....	0.00	0.00	R.B.S.T.	0.00
873	Raiford Convicts	49	Baker	10.78	1.07	1.07	.....	.....	Grading	10.00
874	Raiford Convicts	49	Union	5.93	5.93	5.75	.....	.....	Grading	97.00
875	Convicts	23	Hernando	10.14	9.14	7.90	.....	.....	Grading	65.00
876-C	State Forces	78	Duval	19.15	.....	.....	.....	8.87	R.B.S.T.	90.00
892	Fred D. Beasley, Inc.	30	Indian River	13.00	.....	.....	11.77	0.00	R.B.S.T.	65.00
902	Convicts	70	Sumter	12.33	7.52	0.00	.....	.....	Grading	6.00
909-C	A. B. Curry Const. Co.	4-A	Dade	4.38	4.38	4.16	.....	4.16	Concrete	93.00
928	Convicts	15	Citrus	5.50	5.50	5.50	.....	.....	Grading	100.00
947	Convicts	80	Clay	9.00	6.16	0.00	.....	.....	Grading	10.00
957	Convicts	44	Brevard	8.00	4.65	1.12	.....	.....	Grading	17.00
974-C	Convicts	29	Osceola	18.10	17.92	5.25	.....	.....	Grading	30.00
1013	Convicts	25	Palm Beach	3.60	3.60	.97	.....	.....	Grading	34.00
Total complete October 31, 1931				3347.08	3280.92	1931.88	.....	2804.42		
Complete month of November				.....	17.98	9.58	8.34	15.73		
Total complete November 30th, 1931				3365.06	3290.50	1940.22	.....	2820.15		

### TOTAL MILEAGE COMPLETE

	Concrete	Brick	B.C.	S.A.	B.M.	Asp.B.	S.T.R.B.	S.T.S.C.	Macasphe.
Complete to October 31, 1931	437.06	21.63	54.26	114.61	109.57	23.70	1602.84	336.19	16.81
Complete month of November	1.05	.....	.....	.....	.....	.....	7.85	.....	.....
Complete to November 30, 1931	438.11	21.63	54.26	114.61	109.57	23.70	1610.69	336.19	16.81
Sand Asph. Sand Clay Marl Total									
Complete to October 31, 1931	38.87	136.69	27.58	2907.81	.....	.....	.....	.....	.....
Complete month of November	6.49	.....	.....	.....	.....	.....	15.39	.....	.....
Complete to November 30, 1931	45.36	136.69	27.58	2923.20	.....	.....	.....	.....	.....

## Status of Bridge Construction

Through November 30, 1931.

Project No.	Contractor	Road No.	County	Total Length Feet	Type	Percent Complete
60-B	Fred D. Beasley, Inc.	4	Flagler-Volusia	461.54	Concrete	80.00
66	R. C. Huffman Const. Co.	5	Sarasota	458.57	Concrete and steel span	94.00
71	Okeechobee Const. Co.	4	Brevard	174.00	Concrete	100.00
75	National Surety Co.	27	Collier	561.31	Concrete	95.00
669-W	State Forces	27	Collier	1020.00	Timber	68.00

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